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Journal of the Society of Arts.**FRIDAY, AUGUST 30, 1867.****Announcements by the Council.****ARTIZANS' VISIT TO PARIS.**

Her Majesty's Government have granted to the Society of Arts, in aid of the fund now being raised by the Society for assisting workmen, specially selected from various trades, to visit and report on the Paris Exhibition, the sum of £500, conditional on the Society raising a like amount by public subscription.

The following is the list of subscriptions up to the present date:—

H.R.H. THE PRINCE OF WALES, President	£31 10 0
HER MAJESTY'S GOVERNMENT (conditional)	500 0 0
Society of Arts	105 0 0
Earl Granville, K.G.	5 0 0
Lord de L'Isle	10 0 0
Thomas Twining	2 2 0
Sir J. P. Boileau, Bart.	5 0 0
George Godwin, F.R.S.	1 1 0
Vice-Chancellor Sir W. Page Wood, F.R.S.	10 0 0
Sir W. H. Bodkin (Assistant-Judge)	3 3 0
Sir Rowland Hill, K.C.B.	3 3 0
Benjamin Shaw	2 2 0
Alfred Davis	10 10 0
Eugène Rimmel	5 5 0
Frederick Mocatta	2 2 0
James Marshall	2 2 0
Robert Dawbarn	1 0 0
Henry Vaughan	10 10 0
Philip Sancton	5 0 0
Somerset A. Beaumont	5 0 0
Decimus Burton, F.R.S.	1 0 0
W. Botly	1 1 0
Professor Robert Bentley	2 2 0
John Stuart Mill, M.P.	1 1 0
G. F. Wilson, F.R.S.	2 2 0
Henry Creed	1 1 0
The Marquis of Salisbury, K.G.	10 0 0
D. Robertson Blaine	2 2 0
William Hawes	2 2 0
Seymour Teulon	1 1 0
G. N. Hooper	2 2 0
Lord Taunton	5 0 0
Henry Cole, C.B.	1 0 0
A. Robb	1 1 0
S. Andrews	1 1 0
Thomas Dixon	1 1 0
Charles Telford	1 1 0
Edmund Burke	2 0 0
W. H. Gore Langton, M.P.	5 0 0
J. R. Fowler	1 0 0
John Rutson	1 1 0
W. Fothergill Cooke	2 2 0
J. P. Gassiot, F.R.S.	5 5 0
The Duke of Devonshire	10 0 0
Messrs. Chawner and Co.	2 2 0
Chas. Brooke, F.R.S.	1 1 0
T. Chappell	2 2 0
C. Candy	2 0 0
Alfred Haines	2 2 0
Major-General Sir William Gordon, K.C.B.	2 2 0
Bartlett Hooper	2 2 0

Brought forward	£795 7 0
F. Richardson	1 1 0
J. Sharples	3 3 0
Henry Johnson	2 2 0
C. Skipper, jun.	1 1 0
G. T. Saul	1 1 0
Alderman D. H. Stone	5 5 0
G. H. Walker	1 1 0
R. Worthington	2 2 0
A. W. Miles	2 2 0
J. Harris Heal	2 2 0
John Bell	1 0 0
Messrs. Mander and Co.	2 2 0
B. S. Cohen	1 1 0
John Corbett	1 1 0
J. Zachnsdorf	0 10 6
Major-General Viscount Templetown, C.B.	5 0 0
J. Pearce	3 3 0
Messrs. Huntley and Palmer	2 2 0
A. Glendining, jun.	1 1 0
A. Trevelyan	2 2 0
S. Harrington	1 1 0
Montague Ainslie	2 2 0
James Bentley	2 2 0
Capt. R. P. Oldershaw	1 0 0
E. C. Tufnell	2 2 0
Samuel Redgrave	1 1 0
Joseph Lockett	2 2 0
Messrs. Spicer, Bros.	4 4 0
John Tolhurst	1 1 0
Lord Ebury	5 0 0
C. Lawson	1 0 0
John Horton	1 1 0
W. Baker	1 1 0
Henry Briggs	1 1 0
James Heather	1 1 0
H. Reader Lack	1 1 0
C. Silvy	1 1 0
William Browne	1 1 0
T. Kibble	1 1 0
C. Garland	1 1 0
Antonio Brady	2 2 0

Collected in response to a Circular issued by the Birmingham Chamber of Commerce.

G. Dixon, M.P., Birmingham	5 5 0
Messrs. Smith and Wright, Birmingham	5 5 0
Messrs. Griffiths and Browett, Birmingham	5 5 0
Henry Wciss, Birmingham	2 2 0
W. H. M. Blews, Birmingham	2 2 0
W. Middlemore, J.P., Birmingham	5 5 0
Thomas Lloyd, Birmingham	2 2 0
Messrs. Elkington and Mason, Birmingham	5 5 0
Messrs. John Hardman and Co., Birmingham	2 2 0
Messrs. F. and C. Osler, Birmingham	5 5 0
The Proprietors of the <i>Birmingham Journal and Daily Post</i>	2 2 0
The Proprietors of the <i>Birmingham Gazette</i>	2 2 0
R. L. Chance, Birmingham	2 2 0
T. Avery, Birmingham	2 2 0
W. Tonks and Sons, Birmingham	2 2 0
W. Lucas Sargent, Birmingham	2 2 0
—Mountain (Messrs. Walter, May, and Co.), Birmingham	2 2 0
J. A. Williams, Birmingham	2 2 0
Henry Charlton, Birmingham	2 2 0
W. Bartlett and Sons, Birmingham	5 0 0
John P. Turner, Birmingham	0 10 6
W. H. Avery, Birmingham	2 2 0
Messrs. Peyton and Peyton, Birmingham	3 3 0
James Cartland, Birmingham	2 2 0
Messrs. Smith and Chamberlain, Birmingham	2 2 0
Messrs. Baker and Son, Birmingham	2 2 0
Messrs. Hinks and Wells, Birmingham	2 2 0
Messrs. Van Wart and Co., Birmingham	5 0 0

Carry forward £795 7 0

Carry forward £952 15 0

Brought forward	£952 15 0
Messrs. Evans and Askin, Birmingham ..	2 2 0
C. Shaw, Birmingham ..	2 2 0
James Barwell, Birmingham ..	1 1 0
Messrs. Chance and Co., Birmingham ..	5 5 0
*Messrs. Ashford and Winder, Birmingham ..	10 0 0
*William Aston, Birmingham ..	10 0 0
*Messrs. Chance and Co., Birmingham (2nd donation) ..	5 5 0
*Messrs. Griffiths and Browett, Birmingham (2nd donation) ..	5 5 0
*Messrs. Peyton and Co., Birmingham (2nd donation) ..	2 2 0
Messrs. Gammon and Co., Birmingham ..	2 2 0
Messrs. Messengers and Co., Birmingham ..	5 5 0
Pemberton and Sons, Birmingham ..	2 2 0
Total	£1,005 6 0

Messrs. J. M. Johnson and Sons have kindly placed at the disposal of the Council a number of their five-shilling English Catalogues of the Exhibition, sufficient to present each workman with a copy.

Subscriptions may be forwarded to the Financial Officer, at the Society's House.

The Council are now prepared to receive the names of any workmen recommended by their respective trades as fit and proper persons to undertake this important duty on behalf of their fellow workmen. A certain number have already been selected, and some of them are now in Paris.

PRIZES FOR ART-WORKMEN.*

The Council of the Society of Arts hereby offer Prizes for Art-Workmanship, according to the following conditions:—

I. The works to be executed will be the property of the producers, but will be retained for exhibition, in London and elsewhere, for such length of time as the Council may think desirable.

II. The exhibitors are required to state in each case the price at which their works may be sold, or, if sold previously to exhibition, at what price they would be willing to produce a copy.

III. The awards in each class will be made, and the sums specified in each class will be paid, provided the works be considered of sufficient merit to deserve the payment; and, further, in cases of extraordinary merit additional awards will be given, accompanied with the medal of the Society.

IV. Before the award of prizes is confirmed, the candidates must be prepared to execute some piece of work sufficient to satisfy the Council of their competency.

V. *Bona-fide* Art-workmen only can receive prizes.

VI. Although great care will be taken of articles sent for exhibition, the Council will not be responsible for any accident or damage of any kind occurring at any time.

VII. Prices may be attached to articles exhibited and sales made, and no charge will be made in respect of any such sales.

VIII. All the prizes are open to male and female competitors, and in addition, as regards Painting on Porcelain,

* The Worshipful Company of Salters contribute £10 annually to this prize fund. The Worshipful Company of Clothworkers contribute £10 10s. to this prize fund. The Worshipful Company of Goldsmiths contribute £15 "for the encouragement of workmen in the precious metals." Particulars of the Goldsmiths' Company's prizes are given. The North London Exhibition prize consists of the interest of £167 7s. 3d., invested in the name of the Society of Arts, to be awarded by the Council "for the best specimens of skilled workmanship" at the Society's Exhibition of the works sent in for the prizes named above.

Cameo-cutting, Engraving on Glass, Decorative Painting, and Wall Mosaics, a second set of prizes, of the same amounts, will be awarded among female competitors. If a female desire to compete in the female class only, she must declare her intention accordingly. The originals of the works prescribed may be seen at the South Kensington Museum.

IX. Any producer will be at liberty to exhibit, either in his own name or through his workmen, any work or works as specimens of good workmanship, in the various classes, provided that the work or works be accompanied with a statement of the name or names of the artizans who executed their respective portions; and if the work or works be sufficiently meritorious, extra prizes will be given to the artizans who have executed them.

X. Artizans may, if they think fit, exhibit works executed by them after other designs than those stated above, in any of the classes. Such works may contain the whole or portions of the prescribed designs, and must be of a similar style and character. Competitors must specify the class in which they exhibit. If the works be sufficiently meritorious extra prizes will be awarded.

XI. All articles for competition must be sent in to the Society's house on or before Saturday, the 21st of December, 1867, and must be delivered free of all charges. Each work sent in competition for a Prize must be marked with the Art-workman's name, or, if preferred, with a cypher, accompanied by a sealed envelope giving the name and address of the Art-workman. With the articles, a description for insertion in the catalogue should be sent. The works will be exhibited at the Society's House, and afterwards at the South Kensington Museum.

Casts may be seen at the Society of Arts, Adelphi, London, and the Schools of Art at Edinburgh, Dublin, Manchester, Glasgow, Birmingham, and Hanley in the Potteries.

Photographs and rough casts in metal, &c., may be purchased at the Society of Arts, John-street, Adelphi, at the prices named.

The plaster casts of the examples in classes 2 and 4 (except bas-relief 4a) may be obtained from Mr. Franchi, 15, Myddelton-street, Clerkenwell, E.C.; the other casts from Mr. D. Bruciani, Galleria delle Arti, 40, Russell-street, Covent-garden, W.C.

** The Council are happy to announce that several of the works which received first prizes in the competitions of 1863, 1864, 1865, 1866, and 1867, have been purchased by the Department of Science and Art, to be exhibited in the South Kensington Museum and the Art Schools in the United Kingdom.

FIRST DIVISION.

WORKS TO BE EXECUTED FROM PRESCRIBED DESIGNS.

For the successful rendering of the undermentioned designs in the various modes of workmanship according to the directions given in each case.

CLASS 1.—CARVING IN MARBLE, STONE, OR WOOD.

(a.) *The Human Figure*.—One prize of £15 for the best, and a second prize of £7 10s. for the next best, work executed in marble or stone, after part of a frieze of a chimney-piece, by *Donatello*, No. 5,795, in the South Kensington Museum; or a relief in terra cotta, Amorini supporting an entablature; original in the South Kensington Museum, No. 11,940. Dimensions—Two-thirds the size of the cast (linear).—The design may be adhered to strictly or adapted to any architectural purpose.

[Cast—Fifteen Shillings; Photograph—One Shilling.]

(b.) *Ornament*.—One prize of £10 for the best, and a second prize of £5 for the next best work, executed in marble, stone, or wood after a carved chair-back in the South Kensington Museum. Dimensions—To be two-thirds of the cast (linear).

[Cast—Twelve Shillings. Photograph—One Shilling.]

(c.) *Ornament*.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed in stone, after a *Gothic bracket* in the Architectural Museum. Dimensions the same as the cast. In this design the details may be improved by the introduction of small animals, and the human head may be changed according to the taste of the art-workman.

[Cast—Ten Shillings; Photograph—One Shilling.]

(d.)—One prize of £20 for the best, and a second prize of £10 for the next best, work carved in *wood* after a panel in carved oak. Original in South Kensington Museum, No. 274. Dimensions—Optional.

[Photograph—Sixpence.]

(e.)—One prize of £15 for the best, and a second prize of £7 10s. for the next best, work carved in *wood* after the entablature of a chimney-piece carved in wood, in the South Kensington Museum, No. 85.'64. Dimensions—Same size as original.

[Photograph—One Shilling.]

(f.) *Ornament*.—One prize of £10 for the best, and a second prize of £5 for the next best, work carved in wood after an *Italian picture frame* in the possession of Henry Vaughan, Esq. Dimensions optional.—This design may be adhered to strictly or adapted in such manner as the workman may think fit.

[Photograph—Two Shillings.]

(g.) *Ornament carved and gilt*.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed in wood, carved and gilt after a *Console Table* in the South Kensington Museum, No. 6,497, of the period of Louis XVI. The work to be carved roughly in wood, then to be prepared in the white by a gilder, then cut up or carved in the white by the carver, then to be gilt in mat and burnished gold. As such work may probably be executed by two persons, the prize will be apportioned as the judges may determine.

[Photograph—One Shilling.]

CLASS 2.—REPOUSSÉ WORK IN ANY METAL.

(a.) *The Human Figure as a bas-relief*.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after the Martelli Bronze Mirror Case, No. 8,717, in the South Kensington Museum—dimensions, 6½ inches diameter; or a panel in low relief, the Virgin and Child, in South Kensington Museum, No. 66.'66. Dimensions—One-third of original.

[Cast of Mirror Case—Two Shillings; Photograph—One Shilling. Cast of Bas-relief, 3s. 6d.]

(b.) *Ornament*.—One prize of £5 for the best, and a second prize of £3 for the next best, work executed after a *tazza* in silver, date 1683, the property of Sir W. C. Trevelyan, Bart., now in the South Kensington Museum. Dimensions—The same as the model.

[Photograph—One Shilling.]

CLASS 3.—HAMMERED WORK, IN IRON, BRASS, OR COPPER.

Ornament.—One prize of £7 10s. for the best, and a second prize of £5 for the next best, work executed after a knocker in wrought iron, in the South Kensington Museum, No. 9,007.

If the work is executed in brass or copper, it should be rendered subject to the conditions of these metals, either as split and riveted or partly beaten from the sheet, and the awards will be made in view of these conditions. The work must not be covered with colour or any coating which masks the workmanship.

[Photograph—One Shilling and Threepence.]

CLASS 4.—CARVING IN IVORY.

(a.) *Human Figure in the round*.—One prize of £15 for the best, and a second prize of £10 for the next best, work executed after an ivory plaque of Silenus and Amorini, by *Fiamingo*, No. 1,059, in the South Kensington Museum; dimensions—five inches greatest length; or after a *relievo* in marble, the Virgin and Child, No. 4,233 in the South Kensington Museum. Dimensions—To be reduced in height by one-third (linear).

[Cast of the Plaque—Two Shillings; and Photograph of the Virgin and Child—One Shilling each.]

(b.) *Ornament*.—One prize of £7 10s. for the best, and a second prize of £5 for the next best, work executed after an ivory crozier head, in the South Kensington Museum, No. 214.'65. Dimensions—The same as the cast.

[Cast—One Shilling.]

CLASS 5.—CHASING IN BRONZE.

(a.) *The Human Figure*.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a panel in low relief, the Virgin and Child, in the South Kensington Museum, No. 66.'66.

A rough casting in bronze, on which the chasing must be executed, will be supplied by the Society at cost price.

[Plaster Cast—Three Shillings and Sixpence.]

(b.) *Ornament*.—One prize of £10 for the best, and a second prize of £7 10s. for the next best, work executed after a silver gilt missal cover, in the South Kensington Museum, No. 2,639.

[Photograph—One Shilling.]

CLASS 6.—ETCHING AND ENGRAVING ON METAL—NIELLO WORK.

Prizes of the Goldsmiths' Company.

Ornament.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after arabesques by Lucas Van Leyden, A.D. 1528. No. 18,968 in the South Kensington Museum. To be engraved the height of the photograph, and, if round a cup or goblet, repeated so as to be not less than nine inches in length when stretched out.

[Photograph—Sixpence.]

CLASS 7.—ENAMEL PAINTING ON COPPER OR GOLD.

(a.) *The Human Figure*.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a panel in low relief, the Virgin and Child, in the South Kensington Museum, No. 66.'66. Ground to be blue. Dimensions—Half size of original.

[Photograph—One Shilling; Cast, Three Shillings and Sixpence.]

(b.) *Ornament*.—One prize of £5 for the best, and a second prize of £3 for the next best, work executed after the back of a plate, No. 8,428, in the South Kensington Museum. Ground to be blue. Dimensions—The same as the Photograph.

[Photograph—Sixpence.]

CLASS 8.—PAINTING ON PORCELAIN.

(a.) *The Human Figure*.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a photograph of a drawing by *Raphael*, No. 20 in the South Kensington Museum. Dimensions—The same as the Photograph. This work is to be coloured according to the taste of the painter.

[Photograph—Ninepence.]

(b.) *Ornament*.—One prize of £5 for the best, and a second prize of £3 for the next best, work executed after a photograph of ornament by *Aldegrever*, No. 2,118 in the South Kensington Museum, and coloured according to the taste of the painter, with a gold ground. Dimensions—Double the size of the Photograph (linear).

[Photograph—Sixpence.]

N.B.—A second set of prizes of the same amount is offered to female competitors. See conditions, Section VIII.

CLASS 9.—DECORATIVE PAINTING.

(a.) *Ornament*.—One prize of £5, and a second prize of £3, for a work, executed after a photograph of ornament by *Aldegrever*, in the South Kensington Museum, No. 2,118. Dimensions—length, 3 feet.

[Photograph—One Shilling.]

(b.) *Ornament*.—One prize of £5, and a second prize of £3, for a work, executed after a *picture frame*, in the South Kensington Museum, No. 7,820. Dimensions—5 feet by 3 feet 11 $\frac{1}{4}$ inches, outside measure. The works to be executed on canvass, either with or without stretchers, in cool colours. Some lines of the mouldings may be gilt.

[Photograph—One Shilling and Sixpence.]

N.B.—A second set of prizes of the same amount is offered to female competitors. See conditions, Section VIII.

CLASS 10.—INLAYS IN WOOD (MARQUETRY, OR BUHL), IVORY OR METAL.

Ornament.—One prize of £5 for the best, and a second prize of £3 for the next best, work executed after a guitar inlaid with ivory, ebony, and mother-o'-pearl. The ornament to be of the same dimensions as the original, but may be applied to any object. No. 9,611 in the South Kensington Museum.

[Photograph—Sixpence.]

CLASS 11.—CAMEO CUTTING.

(a.) *Human Head*.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a bust of *Clytie* in the British Museum—The head only.

[Cast of the Head—Five Shillings.]

N.B.—A second set of prizes of the same amount is offered to female competitors. See conditions, Section VIII.

CLASS 12.—ENGRAVING ON GLASS.

Ornament.—One prize of £10 for the best, and a second prize of £3 for the next best, work executed after arabesques by *Lucas Van Leyden*, A.D. 1528. No. 18,968 in the South Kensington Museum. To be engraved the height of the engraving; and if round a glass or goblet, repeated so as not to be less than 9 inches long when stretched out.

[Photograph—Sixpence.]

N.B.—A second set of prizes of the same amount is offered to female competitors. See conditions, Section VIII.

CLASS 13.—WALL MOSAICS.

Human Head.—One prize of £10 for the best, and a second prize of £7 10s. for the next best, work executed after a *Female Head* (over the lame cripple) in the cartoon of the “Beautiful Gate.” The dimensions of the work should be regulated by the size of the tesserae proposed to be used, which size may be left to the choice of the artist. Although desirable, it is not necessary to execute the whole subject in actual mosaic. The original is at the South Kensington Museum. Tesserae of two sizes may be obtained from Messrs. Minton, Stoke-upon-Trent;

Messrs. Maw and Co., Broseley, Shropshire; Messrs. Powell and Sons, Temple-street, Whitefriars; and Messrs. Jesse Rust and Co., Carlisle-street, Lambeth.

[Photograph—One Shilling.]

N.B.—A second set of prizes of the same amount is offered to female competitors. See conditions, Section VIII.

CLASS 14.—GEM ENGRAVING.

(a.) *Human Head*.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a cameo portrait of *Savonarola*, No. 7,541 in the South Kensington Museum. Dimensions—The same as the cast.

[Cast—Sixpence.]

(b.) *Full-length Figure*.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a small *Wedgwood* medallion, No. 5,827 in the South Kensington Museum. Dimensions—The same as the cast.

[Cast—Sixpence.]

CLASS 15.—DIE SINKING.

Human Head.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a *Wedgwood* Medallion in the South Kensington Museum, No. 3,470. Dimensions—

[Photograph—Sixpence.]

CLASS 16.—GLASS BLOWING.

Ornament.—One prize of £7 10s. for the best, and a second prize of £5 for the next best, work executed after an original in the South Kensington Museum, No. 6,785. Dimensions—As given in the wood engraving.

[Photograph—Sixpence.]

CLASS 17.—BOOKBINDING.

(a.) *Bookbinding*.—One prize of £7 10s. for the best and a second prize of £5 for the next best, work executed in bookbinding, after a specimen in the South Kensington Museum, No. 164.'64. The work to be bound should be some classical author of the size given. Dimensions—The same as the photograph.

[Photograph—One Shilling.]

CLASS 18.—EMBROIDERY.

Ornament.—One prize of £5 for the best, and a second prize of £3 for the next best, work executed, either after *Two Angels* in an example in the South Kensington Museum, No. 1194.'64, or an *Italian Silk* in the South Kensington Museum, No. 7,468, which may be adapted to a screen. Dimensions—According to the taste of the embroiderer.

[Photograph—German, Sixpence; Italian, One Shilling.]

CLASS 19.—ILLUMINATIONS.

Ornament.—One prize of £5 for the best, and a second prize of £3 for the next best, copy made from an Altar Card, attributed to *Giulio Clovio*, in the South Kensington Museum, No. 2,958, or from a MS. border, date 1450, No. 3,057, in the South Kensington Museum. Dimensions—One-half larger than the Photograph (linear).

[Photograph—Two Shillings.]

SECOND DIVISION.

CLASS 20.—WOOD CARVING.

(a.) *Human figure in the round, in alto or in bas relief*. *Animals or natural foliage may be used as accessories*. 1st prize of £25 and the Society's Silver Medal. 2nd prize of £15. 3rd prize of £10.

(b.) *Animal or still-life. Fruit, flowers, or natural foliage may be used as accessories.* 1st prize of £10. 2nd prize of £7 10s. 3rd prize of £5.

(c.) *Natural foliage, fruit, or flowers, or conventional ornament, in which grotesque figures or animals may form accessories, preference being given where the work is of an applied character for ordinary decorative purposes, as representing commercial value.* 1st prize of £10. 2nd prize of £7 10s. 3rd prize of £5.

(By order)

P. LE NEVE FOSTER, *Secretary.*

Proceedings of Institutions.

RYDE LITERARY INSTITUTE.—The report for the past year says the balance sheet for last year showed a balance in hand of £12 4s. 9d.; the amount received since that time is £90 6s. 2d.; the amount of payments is £94 8s. 11d. There is, therefore, a deficiency on the year's account of £4 2s. 8d.; thus the balance in hand of treasurer is reduced to £8 2s. The extra expenses of the year have been £15 15s. for catalogues, labels, and library shelves. Books to the value of about £8 have been purchased and added to the library during the past year. The names of 111 members are at present on the books. A new catalogue has been issued. The statement of accounts shows that the receipts have been £102 10s. 11d., and that there was a balance in hand of £8 2s.

SOUTH-EASTERN RAILWAY MECHANICS' INSTITUTION.—The thirty-ninth report, being for the half-year ending March 31, 1867, congratulates the members on the present prosperous condition of the Institution. The present number of members is 280, which is the same as at the corresponding period last year. Sixty-eight volumes have been added to the library, which now contains 1,568 volumes. New catalogues have been prepared. Classes for instruction in arithmetic, writing, and spelling, for juniors and adults, French, vocal music, mechanical and free-hand drawing have been carried on during the whole of the half-year; they have been attended by upwards of a hundred of the members, and the teachers report very favourably of the progress of the pupils. The members have had the opportunity of attending all lectures and readings in connection with the Ashford Institution free of charge during the winter months. The financial statement shows a balance in hand of £37.

WIGAN MECHANICS' INSTITUTION.—The thirteenth annual report states that the career of the Institution has not been marked by any particular feature. The subscription for painting and cleaning the Hall, including £50 granted by the Public Hall Association, amounted to £72 13s. The balance of the cost has been paid by the Institution. Several entertainments given at the commencement of the winter entailed a loss to the Institution of upwards of £15. The library has been weeded by the sale of 700 volumes, which were found of no use to the Institution. The vacancy has to a certain extent been filled up by the purchase of 61 volumes of new works, and by presents. The number of books now in the library is 2,451; 1,204 more volumes have been taken out during the past year than the year previous. The number of members is 303, slightly less than in the previous year. At the Government examination of Science Schools in 1866, several candidates obtained prizes. The income was £574; and there is a balance against the Institution of about £47.

EXAMINATION PAPERS, 1867.

The following are the Examination papers set in the various subjects at the Final Examination held in April last:—

(Continued from page 624.)

ENGLISH LITERATURE.

THREE HOURS ALLOWED FOR THE TWO AUTHORS
SELECTED BY THE CANDIDATE.

SHAKESPEARE.

(“Hamlet.”—“Henry V.”—“The Tempest.”)

1. In what connexion does each of the following passages occur? Explain every allusion and remarkable expression:—

(a.) Since thou dost give me pains,
Let me remember thee what thou hast promised,
Which is not yet performed me.

(b.) The slave, a member of the country's peace,
Enjoys it; but in gross brain little wots
What watch the king keeps to maintain the peace,
Whose hours the peasant best advantages.

(c.) The single and peculiar life is bound,
With all the strength and armour of the mind,
To keep itself from 'noyance; but much more
That spirit, upon whose weal depend and rest
The lives of many.

(d.) For in the book of Numbers is it writ,—
When the man dies, let the inheritance
Descend unto the daughter.

(e.) We are such stuff
As dreams are made on, and our little life
Is rounded with sleep—

(f.) I once did hold it, as our statists do,
A baseness to write fair, and laboured much
How to forget that learning—but, sir, now
It did me yeoman's service.

2. Explain the following words and expressions:—
galliard, termagant, clepe, cerements, flote, eyases,
espials, imposthume, “out-herod's Herod.” “a babbled
of greenfields,” “still vexed Bermoothes.”

3. In what senses that have now become obsolete, were
these words often used in Shakespeare's time:—*let, antic, crisp, sort, ecstasy, marches.*

II.

4. Compare Ariel with Caliban.

5. Sketch the plot of the second act of *Hamlet*.

6. In what respects has Shakespeare deviated from his
tory in *Henry V.*? From what source did he take his
main facts?

7. Describe the character of Hamlet's mother.

8. What do you know regarding the texts of *Hamlet*
and *Henry V.*?

MILTON.

(“Paradise Lost,” Books I. to VIII.)

1. In what connexion does each of the following passages occur? Explain the allusions and notice any
remarkable expressions:—

(a.) The easier conquest now
Remains thee, aided by this host of friends,
Back on thy foes more glorious to return,
Than scorner thou didst depart.

(b.) Greater now in thy return
Than from the giant angels: thee that day
Thy thunders magnified; but to create
Is greater than created to destroy.

(c.) In solitude
What happiness? Who can enjoy alone;
Or, all enjoying, what contentment find.

(d.) As when by night the glass
Of Galileo, less assured, observes
Imagined lands and regions in the moon:
Or pilot, from amidst the Cyclades
Delos or Samos first appearing, kens
A cloudy spot.

(e.) The mind is its own place, and in itself
Can make a heaven of hell, a hell of heaven.
What matter where, if I be still the same
And what I should be—

2. Give an account of the allegory of Sin and Death, and illustrate it from Scripture.

3. As when from mountain tops the dusky clouds
Ascending, while the north wind sleeps, o'er-spread
Heaven's cheerful face; the lowing element
Scowls o'er the darkened landscape snow, or
shower, &c.

In what connexion does this passage occur? What reflection on the conduct of human creatures follows? How far do you agree with the poet's sentiment?

II.

4. Mention, and quote if you can, any passages in the *Paradise Lost* in which Milton alludes to the circumstances of his own life and times.

5. Sketch the argument of the Second Book of the *Paradise Lost*.

6. What do you know of the circumstances connected with the writing and first publication of the *Paradise Lost*?

7. Briefly compare the *Paradise Lost* with any other great poem with which you may be acquainted.

8. Give a list of Milton's principal works.

BUTLER.

(The Analogy, Part I.)

1. What is the nature of analogical evidence?

2. Give an outline of Butler's argument from analogy in favour of a future state.

3. "There is in the nature of things, a tendency in virtue and vice to produce the good and bad effects now mentioned in a greater degree than they do in fact produce them." Explain this statement.

4. What would be the result if a perfectly virtuous community of men existed on the earth? How does this supposition illustrate Butler's argument?

5. "Now the beginning of life, considered as an education for mature age in this present world, appears plainly, at first sight, analogous to this our trial for a future one." Sketch the line of reasoning in which these words occur.

6. In what connexion are the words *moral* and *positive* opposed to each other?

7. Explain the terms *necessity* and *final cause*.

II.

8. Give a short analysis of the first part of the Analogy.

9. What do you know of the principal works the tendency of which the Analogy was intended to counteract?

10. Sketch the life of Butler.

SHAW.

(History of English Literature, Chaps. I., II., IV., V., to IX., XV., XX., XXII.)

1. Give an account of the way in which the Latin element of the English language has been brought in.

2. Sketch a life of Chaucer and give a list of his principal works.

3. What do you know of Southwell, Fairfax, Sir Philip Sydney, Lord Buckhurst.

4. Give some account of the Faery Queen.

5. What was the effect of the philosophical works of Lord Bacon upon the study of natural science?

6. In what way was the drama first developed in England?

7. Give a classified list of Shakespeare's plays.

8. Which are called "The Augustan Poets?" Why are they so called?

9. What do you know of the principal essayists of Queen Anne's time?

10. Sketch the life of your favourite modern poet, and name his chief poems.

LOGIC AND MENTAL SCIENCE.

THREE HOURS ALLOWED.

MORAL PHILOSOPHY.

Smith's Theory of Moral Sentiments.

1. How do we judge of the propriety or the impropriety of the sentiments manifested by our fellow-men?

2. Analyse the sentiments of *amiability* and *respectability*.

3. Why is it a breach of propriety strongly to express our animal passions, and no breach of it to express the social passions to any degree we choose?

4. What is the origin of ambition?

5. On what ground does Adam Smith teach us that we regard an action as being worthy of reward or punishment?

6. Analyse the sense of merit and demerit.

7. Explain the principle of *self-approbation* by the law of sympathy.

8. How do you distinguish between the desire of praise and praise-worthiness, and between the hatred of blame and blame-worthiness?

9. How does Adam Smith evolve the sense of duty out of the law of sympathy?

10. How are the general rules of morality formed, and what is their especial value and authority?

LOGIC OF INDUCTION.

Mill's Logic.

1. Explain the difference between reasoning *inductively* and reasoning *deductively*.

2. In investigating any branch of physical science the facts of the case have to be carefully collected. Distinguish between such a collection of facts and induction properly so called.

3. Whately says that all inductions are syllogisms with the major premiss suppressed. Is this true? If so, what is the major premiss when supplied, and on what basis does it rest?

4. Distinguish between *laws of nature* and particular instances of them. Give examples of both.

5. How does Mill state the law of causation, and on what evidence does he consider it to rest?

6. What is meant by the composition of causes? Does it always follow the analogy of the composition of forces?

7. State and explain Mill's four methods of experimental inquiry.

8. What is an hypothesis? When is it legitimate, and what is its proper use?

9. What is Mill's explanation of the word *chance*? Is there any ground for a calculation of chances? What is it?

FORMAL LOGIC.

1. Which of our intellectual powers are independent of any aid from *language*, and which of them can only be properly developed by the co-operation of language? Give reasons for your conclusions on this point.

2. What is the difference between abstraction and generalisation? What names do you give to the result of these faculties—first, when only conceived in the mind; secondly, when stated in words?

3. Can logic tell us whether any single proposition is true or false? If so, why? If not, why not?

4. What is meant by the extension and comprehension of a term? How are extension and comprehension related to each other?

5. Explain the doctrine of the *predicables*, and give a complete classification of all possible predicates.

6. Give the rules for a correct logical division and definition. How are these rules often violated in common life?

7. What is meant by the *quality* and what by the *quantity* of a proposition? What simplifications have been proposed in formal logic, through properly marking the quantity of the predicate?

8. There are six general rules of the syllogism. State and justify them.

9. What is an enthymeme? Put the following examples into a complete syllogism, stating the mood and figure:—

a. Ireland is distressed, therefore it is misgoverned.
 b. The Epicureans cannot be considered true philosophers, because they did not consider virtue to be essentially good.

10. What is an epicherema? Expand the following into two or more separate syllogisms:—Every thing, the knowledge of which is obtained by intuition, is true, because upon such intuitions all reasoning and all knowledge are based. But our mental identity is a fact, which we know by intuition, since the belief of it is immediate, irresistible, universal; it, therefore, must be grounded in truth.

11. How may fallacies be classified? What names would you give to the following?

a. No evil should be allowed that good may come; but all punishment is an evil, so that no punishment should be allowed that good may come.

b. Leaving off animal food has greatly improved his health, for he has never experienced a headache since.

MENTAL PHILOSOPHY.

Sir W. Hamilton's Lectures.

1. What general classification of mental phenomena was adopted by Hamilton, and how did he *sub-divide* the intellectual powers? Show the precise function of each of the faculties enumerated under the latter.

2. Hamilton speaks of our knowledge in *perception* being regarded by some writers as mediate, by others as immediate. To what theories of perception does he refer, and what different forms have these theories assumed?

3. What is meant by natural realism, and what by cosmesthetic idealism? On what grounds has the former been denied?

4. Prove by facts that sensation and perception are in the inverse ratio to each other.

5. Is visual distance a simple perception? What is Berkeley's theory on this point, and on what grounds did he maintain it?

6. What does Hamilton mean by "latent thought?" Give the facts of the case, and what they are intended to account for?

7. What difference does Hamilton draw between the *retention* and the *reproduction* of our ideas? State the laws of reproduction.

8. Give a brief account of Hamilton's views respecting the nature and province of imagination.

(*To be continued.*)

PARIS EXHIBITION.

The committee entrusted with the task of watching the proceedings, and deciding on the relative merits of the English and American safes, have resigned their functions. If this act had merely resulted from the inherent difficulties of the case, and from the departure from the terms of the original agreement, no one who watched the proceedings, or has carefully read the report, should be surprised; but when it has arisen from a different cause, and one which we feel a delicacy in touching upon, and we shall only say, therefore, that, in consequence of an improper proceeding of one of the parties interested, the president of the committee resigned his office, and the other members immediately refused to proceed further. As regards the English public, and especially those who are interested in the safe custody of valuables, the trial has clearly shown that Mr. Chatwood's safe is proof against any of the means at the disposal of burglars.

Few objects in the Exhibition have wider or a deeper interest than the specimens of cheap houses, or apartments for working men and their families; some remarks on what is being done under this head in Paris appeared in the notes of the "Society's Visit to Paris," in last week's *Journal*, and a few particulars respecting the efforts of the Mulhouse and other societies will help to

complete the case. The Mulhouse Société des Cités Ouvrières was formed in 1853, with a capital of 300,000 francs, since increased to 355,000 (£14,200), its object being to put workmen in possession of houses of their own, by payment running over a certain number of years. The whole of the shares, each of the value of 5,000 francs, are held by twenty-one persons. At the outset of the society, the Duc de Persigny, then Minister of the Interior, obtained from the Government a grant of 300,000 francs, to be employed by the Company in creating establishments of public utility, and it was employed in building a large restaurant, a bakery, baths and washhouses, an asylum, broad streets bordered with trees, fountains, sewers, &c., and the Company undertook, on receipt of this subvention, to abandon its profits, to sell its houses and grounds at cost price, only to pay its shareholders 4 per cent. per annum, and to expend at least £36,000 in building houses. The first houses were erected in the year 1854, and the total number constructed to the end last year was 800. For some time all the houses have been built in groups of four, after two plans, that is to say, on one or two floors, each having a cellar and loft of the whole size of the house, and a private garden. The houses on two stories contain a large room on the ground floor, which may, if necessary, be divided in two, a kitchen and two rooms upstairs; those on one floor have two rooms, and a chamber if required in the loft. The ground covered by each house and garden averages about 200 square yards, and is enclosed by wooden palings. The rise in the price of materials has lately caused an increase in the cost of the houses—those on one floor costing at present £106, and those with an upper floor £132 to £136. The workmen who purchase the houses are allowed fifteen years to pay for them, but they have to pay down a sum varying from £8 to £12, according to the value, and to pay, moreover, 5 per cent. on the outlay. The payments are required to be made monthly, at the rate of 16s. to 20s. per month, and this only exceeds the ordinary rent of inferior houses in the same locality by five shillings to six shillings per month. The number of houses sold varies extremely—in 1856 the number was only five; in 1857 it was 110; and since that period it has ranged from 19 to 100; the sales this year have already amounted to 55, or more than the average. The payments are made with great regularity, and are often pre-dated to save the interest on the capital. An equitable arrangement is made when the purchaser cannot complete his bargain, and no instance of forfeiture has occurred; and of 645 houses sold previous to 30th June, 1866, 200 have been completely paid for. The total sum received by the Company, without counting the 5 per cent. interest, is more than £50,500. These results are highly satisfactory, and the Company continues to build from 50 to 60 new houses annually.

It is an interesting fact that more than twenty of the houses sold have been purchased for their parents by young soldiers out of the bounty paid to voluntary recruits; it is equally satisfactory to know that the possession of a comfortable house weans the Mulhouse *ouvrière* from the wine shop.

The restaurant and the bakery sell their productions at cost price, so that the bread is considerably cheaper there than elsewhere. A meal of soup, meat and vegetables costs 35 centimes (3½d.). Clothing, groceries, and other necessaries are also sold as cheaply as possible, but always for cash. The charges at the baths and washhouses are, for a comfortable bath, with towels, 15 centimes, and for two hours washing, and the use of the hot-airstove, 5 centimes, or one halfpenny. The asylum is capable of receiving 250 to 300 children between the ages of three and six years, and there are two large primary schools near the *Cités ouvrières*.

One large house is composed of furnished apartments for bachelors, who have each a nicely-furnished room for 5s. 5d. per month.

One condition is insisted on by the Company, namely,

that every one who buys or hires a house in the *cité* shall send his children to school; and annual prizes are awarded to those who distinguish themselves in the education of children, in the care of their houses and gardens, and in general order and economy. A large free library is established in the *cité*, and the number of books taken out last year exceeded 70,000. The population amounts to 5,500 souls.

The total outlay of the Company for ground and buildings to the present time is stated to amount to 2,400,000 francs (£96,000), and the payments of the purchasers now greatly exceeded the amount of the loans contracted by the Company, which amount to about £40,000.

One source of profit to the Company is the sale of plots of ground amidst the *cités ouvrières* for the establishment of spinning and weaving mills, the tract of land purchased by the Company being large and formerly of small value. These particulars are derived from an official report signed by M. Jean Dollfus and three other administrators of the *cités ouvrières*, as well as by M. Emile Muller, their architect.

The next most important experiment of the same kind has been made by the Company of the collieries of Blanzy, in the department of the Seine and Loire, which employs 3,500 men, and has built 679 houses, on a plan closely resembling that of the Mulhouse Company; it has also let or sold plots of ground for 99 other houses, erected by the men themselves. Each habitation consists of three rooms, and has a garden attached. The cost of each house, land included, is given at 2,200 francs (£88), and the rent is 54 francs a year, or about three-halfpence a day.

In the model house erected in the grounds of the Exhibition will be found a fine collection of the minerals of Blanzy, and other interesting matters.

The old water-works of Marly, those created by order of Louis XIV., to supply the palace and fountains of Versailles, were once almost numbered amongst the wonders of the world, but no vestige of these has been in existence for many years; models of them, however, are preserved in the *Conservatoire des Arts et Métiers* of Paris. The machinery was reconstructed between the years 1811 and 1826; but that now in operation was only decided on in 1854, and is not yet quite finished.

The old machine was the work of the Baron de Ville, engineer, and a clever carpenter of Liege, named Pennequin, and consisted of fourteen large wheels with vertical pumps, which lifted the water from the river to a first reservoir, sixty other pumps then raised the water from the first to a second reservoir, and a third set of pumps raised it again to the top of a tower erected at the head of the great aqueduct. The number of pumps was two hundred, and the connecting apparatus was of the most complicated and primitive description, making far more noise than work, so much so that with water power estimated at from 1,000 to 1,200 horse power, the machinery never raised more than 5,000 tons in the 24 hours, and lastly fell off to 2,000 tons.

The new machine has six water wheels, and when completed—only five are yet in work—is calculated to lift 15,000 to 16,000 in the 24 hours to an elevation of more than five hundred, spread over a distance of about 7,500 feet. The machinery consists of vertical water-wheels, each of which has four horizontal pumps, worked by cranks on the axis of the wheels. Each of the wheels is 40 feet in diameter, and nearly 15 feet in width. A nicely executed model and series of plans and sections, together with full details of the new machinery and its capabilities, will be found in a small building in the park, not far from the model houses above referred to.

The comparative dryness of the soil of Paris, and the very small quantity of vegetable mould which lies on the stony strata, makes it very difficult to keep grass in good condition, and recourse is had to several ingenious methods of watering, the most simple being the use of pipes, attached to a hydrant, and pieced with a few rough holes in their sides; the pressure

being considerable, the water is forced through these jagged holes in the form of fine spray, or, as it is curiously enough called here, in powder. A modification of his method has recently attracted considerable attention in the exhibition grounds; the nozzle of a water pipe is held up by a small frame, and attached to it by a joint is a small curved piece of pipe which revolves by the force of the water as it issues through the pipe; the consequence is that the water is flung over the grass in the finest form possible; the effect of the rays of the sun upon this artificial mist is very curious. Another and highly important application of this extreme subdivision of water is now under experiment here, namely, the construction of a steam engine without any boiler, the steam being produced instantaneously in the furnace. We have not yet seen this machine, which is the invention of M. Pascal, of Lyons, assisted by M. Savial du Fay, engineer in the Imperial navy, and which was examined the other day by the Emperor in one of the courts of the *Mobilier de la Couronne*, Quay d'Orsay.

Manufactures.

A NEW ACT ON EQUITABLE COUNCILS.—The Act to establish equitable councils of conciliation to adjust differences between masters and workmen has just been printed. After reciting the 5th of George IV., c. 96, and the other Acts to amend the same, it declares that in order the better to facilitate the settlement of disputes between masters and workmen, it is expedient, without repealing the several Acts, that masters and workmen should be enabled, when licensed by her Majesty, to form equitable councils of conciliation or arbitration, and that the powers of the Acts for enforcing awards made under or by virtue of the provisions should be extended to the enforcing the awards to be made by and under the authority of such equitable councils of conciliation. The mode of procedure is for a number of masters and workmen in a locality to call a meeting, and agree to form a council of conciliation and arbitration, and to petition her Majesty or the Secretary of State to grant a licence, which may be done after notice in the newspapers. A council is not to consist of less than two nor more than ten masters and workmen and a chairman, and the petitioners for a licence are to proceed to the appointment of a council from among themselves within thirty days after such grant of licence, and the council is to remain in office until the appointment of a new council in its stead. The council is to have power to determine questions submitted to it, and to enforce its awards, as mentioned in the first recited Act, by an application to a magistrate, by distress, sale, or imprisonment. No council under the Act is to establish a rate of wages or price of labour or workmanship at which the workmen shall in future be paid. A committee of conciliation is to be appointed by a council. "No counsel, solicitors, or attorneys to be allowed to attend on any hearing before the council or committee of conciliation unless consented to by both parties." Householders and part occupiers may demand to be registered and to have a vote for the council, and may be elected thereto. A registry is to be kept, and the masters and workmen are to elect the council. The forms to be used in carrying out the Act, and to enforce the awards of the councils on the questions "submitted to them by both parties," appear in the Act.

Commerce.

COTTON IN SOUTH CAROLINA.—Mr. H. P. Walker, Her Majesty's Consul at Charleston, in a despatch addressed to Lord Stanley, remarks on the probable results of the operations of the agriculturists of South

Carolina during the present year. On a former occasion (he says) I ventured to predict that the exports of cotton from Charleston for the year to end on the 31st of August would not exceed 150,000 bales. The business of the season may now be considered as closed; very little more is likely to come during the three remaining months of the year, and the quantity is exactly in accordance with my preconceived views. At the present moment the inhabitants are exerting themselves to the utmost of their ability to produce another crop. They are, however, suffering most grievously from famine; it has driven very many of their number away; many negroes have been induced to go to Florida, some to Africa, and many others to South Western States. On the other hand, there has been no influx to take the place of the emigrants. The effect of the famine has also become apparent in the impaired strength of the animal power usually kept and used by the agriculturists in their proper pursuits. I have made particular inquiry of the progress of the farmer in the interior, and I am sorry to be again compelled to draw unfavourable conclusions. In short, I am obliged to predict that his present operations will not promote the prosperity of former years. To place this port in its former position, it is necessary to supply it with 550,000 bales of cotton for export. The current year has given it 150,000, and the agriculturists of the interior must be asked for the remaining 400,000. The response will be, the war has ruined us. Our negroes have gone away; want of means precludes us from offering to others sufficient inducements to contract with us, and we have not the necessary mules and horses to carry the ploughs we would desire to run. And then, again, they will say, our crop last year perished during the summer drought, and having no food for ourselves, we cannot possibly provide for retainers. But the same system which caused the present terrible famine is still persevered in, and must necessarily sooner or later drive from the land much of its labour power. The negro being a free man, the planter leaves him to provide for himself, and thinks only of the cotton which his labour is to produce, and the returns to be obtained for it. In former times the master was more keenly alive to the responsibility that was on him to provide food for his slaves; now, having no slaves, that responsibility is removed; he plants cereals only for his own immediate use; he plants cotton for such returns as will pay the expenses of the farm, and furnish the planter with such income as his sense of comfort requires. But the inevitable result of this system is a recurring famine and a still further depleting of the population. For when the want of corn is general, to supply it to every household throughout an extensive area is quite impossible. The number of plantations in the State, I have no doubt, is very much greater than during the last year; but the aggregate of negroes employed, I am equally sure, is very much less. Yet I am not disposed to think that the production of the State will be less; for allowance ought to be made for the industry and zeal of the cotton planter; and I believe that the heavy supplies of guano, that by some means or other the planters have managed to secure, will occasion a production sufficient in this year to counterbalance the loss to be sustained by the diminution of labour. I conclude, therefore, that the section of country which is tributary to this port will, for the ensuing year, furnish to her for export a quantity of cotton corresponding very closely with the amount furnished during the current year; but that the plan of operations is erroneous, and must tend to the gradual diminution of the labour of the country, and to the consequent cessation to the same extent of agricultural operations. But, in addition to this great impediment to the prosperity of the agriculturist, it should be borne in mind that the high prices which must be paid for every article of use or consumption are more than corresponding with the increased rate he obtains for his agricultural products. These

high prices are occasioned by an inflated currency and by the imposition of taxes, so general in their application as to reach almost every conceivable thing. But even this is not all, for a still further tax of two cents and a half per pound must be paid on all the cotton of the ensuing season. In short, the planter meets with so much discouragement, that the wonder is he possesses the courage to persevere in so hazardous an enterprise as that to which his talents, capital, and life are directed.

BRITISH INDIA.—A blue-book of 72 pages has just been issued, which may probably be regarded as the first of an annual series—a *Statistical Abstract* relating to British India. It describes British India as having an area of 955,238 square miles, and a population estimated at 144,674,615; native States an area of 596,790 square miles, and a population of 17,909,199; States under French Government 188 square miles, and 203,887 inhabitants; States under the Portuguese Government 1,066 square miles, and 313,216 inhabitants—making a grand total of 1,553,282 square miles, with a population of 193,100,963. The population of Calcutta, according to the census of January, 1866, was 377,924; of the town of Bombay, according to the census of February, 1864, 816,562; of the town of Madras, according to the administrative report for 1863, 427,771. The commercial progress of British India of late years has been astonishing. In the financial year 1840-41 the merchandise imported by sea from foreign countries was of the value of £8,415,940; in 1860-61 it had risen to £23,493,716; in 1864-65 it was £28,150,923; in addition to £21,363,352 of treasure. In the year 1848-49 cotton goods of the value of £2,222,089 were imported into British India; in the year 1864-65 of the value of £11,035,885. The exports of merchandise from British India increased from £13,455,584 in the year 1840-41 to £32,970,605 in 1860-61, and to £68,027,016 in 1864-65. This last increase was, of course, due chiefly to the effect of the American civil war; in the year 1859-60 the export of raw cotton from British India amounted in value to £5,637,624, in 1864-65 to £37,573,637. The other chief exports in 1864-65 were:—Opium, £9,911,804; rice, £5,573,537; seeds, £1,912,433; indigo, £1,860,141; jute, £1,307,844. The United Kingdom took £7,054,388 worth of the exports in 1840-41, and £46,873,208 in 1864-65. Exports of the value of £10,874,652 in the last year went to China and Japan, and £2,902,596 to France. The entrances and clearances of British vessels in that year at ports of British India amounted together to 10,911 vessels, of 5,417,521 tons; of European and other foreign vessels 1,755, of 920,532 tons; of native craft, 40,277, of 1,582,864 tons. In the year 1864-65, 2,747 miles of railway were opened in India, and conveyed 12,826,518 passengers. There were 1,421 post-offices, and 55,986,646 covers were transmitted through the post, besides books and parcels. 17,117 schools and colleges were maintained or aided by the Government; the average attendance of pupils in them was 435,898, and the Government expenditure upon them £391,277. £4,473,263 was expended in the year upon public works. 11,736 miles of government telegraph lines were open. The gross public revenue of British India increased from £20,124,038 in the financial year 1839-40, to £45,652,897 in 1864-65; and the expenditure from £22,228,011 in the former year to £46,450,990 in the latter. The public debt advanced from £34,484,997 in 1839-40, to £98,477,555 in 1864-65. The troops employed in British India in the former year were 34,604 Europeans and 199,839 natives; in 1864-65, 71,880 Europeans and 118,315 natives.

Colonies.

EXPORT OF GOLD FROM VICTORIA.—The total amount of gold exported from the colony since the beginning of the year is 681,410 ozs., of which 76,725 ozs. were

from New Zealand. During the corresponding period of last year the quantity exported was 656,871 ozs., of which 121,393 ozs. were from New Zealand.

REVENUE OF NEW SOUTH WALES.—The Customs' revenue at this port continues to decrease, and, with the exception of November last, the receipts for last month were smaller than for any similar period since the commencement of 1866. The receipts for the month ending 31st ultimo were as follows:—Brandy, £8,710 4s. 4d.; gin, £4,100 17s. 4d.; liqueurs, cordials, or strong waters, £70 14s. 3d.; whisky, £1,028 13s. 7d.; rum, £10,553 10s. 1d.; perfumed spirits, £102 14s. 10d.; all other spirits, £545 7s. 10d.; wine, £1,854 14s. 10d.; ale, porter, and beer, in wood, £1,139 3s.; ditto, in bottle, £625 4s.; tobacco and snuff, £4,343 11s.; ditto, unmanufactured, £979 18s.; cigars, £503 3s. 11d.; tea, £4,332 16s. 8d.; coffee and chicory, £589 1s. 10d.; sugar, refined, £99 16s. 4d.; unrefined, £5,385 14s. 6d.; dried fruits, £499 7s. 8d.; hops, £28 14s. 6d.; malt, £38; rice, £1,181 8s. 11d.; gold, £18 14s. 2d.; opium, £819 16s. 3d.; bonding warehouse duty, £275 5s.; pilotage, £493 3s. 4d.; dues, £48 12s.; ad valorem, £3,851 12s. 10d.; package charge, £2,612 9s.—Total, £54,841 10s. The receipts during the corresponding month of last year were £75,308; there is therefore a comparative decrease in the month of £20,467. Taking the whole of the receipts, during the first five months of this year, we find that they are £25,615 less than those of the same period of 1866; the amounts being—first five months of 1866, £337,958; ditto of 1867, £312,343. The following table will show each month's receipts during the periods referred to:—

	1866.	1867.
January	£68,140	£77,875
February	64,267	66,916
March	64,491	55,073
April	65,752	57,638
May	75,308	54,841
	£337,958	£312,343

The yield of the new gold-fields at Emu Creek has caused the escort returns for last month to show a gratifying increase on the preceding months of this year. The quantity received from the various gold-fields during May amounted to 19,549 oz., of which 14,550 oz. was from the Western mines, 3,439 from the Southern, and 1,560 from the Northern. During the month of May, 1866, the receipts were—Western, 11,948 oz.; Southern, 8,095; Northern, 1,566. On comparing the two periods, it will be seen that there is an increase of 2,602 oz. in the receipts from the Western, but a decrease of 5,656 oz. in the Southern, and of only 6 oz. in the Northern. The gross receipts from January 1st to the 31st ultimo, amounted to 78,838 oz., as against 95,038 oz. received during the corresponding period of last year—a decrease of 19,200 oz. The following table shows the quantities of gold received by the various escorts during the four months of 1866 and 1867:—

	Western.	Southern.	Northern.
January	9,464	7,131	1,338
February	9,363	7,255	1,543
March	8,355	7,346	2,413
April	11,559	5,975	1,687
May	11,948	8,095	1,566
	50,689	35,802	8,547
	1867.		
January	8,325	2,670	2,334
February	8,210	5,849	1,124
March	8,941	5,698	2,127
April	9,311	3,474	1,226
May	14,550	3,439	1,560
	49,337	21,130	8,731

As in some cases large amounts have been recently brought down by private hands, it is becoming more difficult to arrive at the real yield of our gold-fields.

WINE IN AUSTRALIA.—We (*Observer*) need hardly say that the Customs' laws of Victoria are a real grievance to our vigneron. The duty of 3s. a gallon is prohibitive of all but our highest-class wines. This is, perhaps, not an unmixed evil. It prevents our manufacturers sending any but their best wines, so that the Victorians see our highest samples. Still the evil is a great one, and all the greater because the same law does not apply to the wines of New South Wales. We have to contend against a protective duty almost equal to the original value of the article. And it says much for the excellence of our productions, that notwithstanding this they have taken and retain a high position amongst our neighbours. There are gentlemen in Victoria who are exceedingly anxious to see this vexatious restriction abolished, that for the sake of their own colony they might be able to import our superior wines at moderate prices. And we can only indulge the hope that before long some means may be found to place our vigneron in a fairer position, and that they who have sunk so much capital and spent so much anxious labour in wine making may have the Victorian market open to them. There is not a more useful work to which our Government could address themselves than this. Free trade in native wines with Melbourne would be of incalculable advantage to us just now, when most of our interests are in a languishing condition. The total value of our wines which entered Victoria in 1866 was only £2,262. Now, if the duty were removed, this amount could easily be increased tenfold, and new life would be put into the trade in this colony.

AGRICULTURAL STATISTICS OF NEW SOUTH WALES.—The following statistics are compiled from the *Statistical Register* for 1865:—The number of occupiers of land (exclusive of those for pastoral purposes) is 22,509; of these 13,818 were freeholders, and 8,691 leaseholders. The extent of their holdings is estimated at 7,277,255 acres, of which 4,590,406 acres were freeholds, and 2,686,849 acres leaseholds. There are 381,400 acres under general cultivation; 131,653 acres with wheat crops; 113,442 acres with maize; 5,843 acres with barley; 10,939 acres with oats; 15,290 acres with potatoes; 61,909 acres with hay. The cultivation of cotton has fallen off, only 11 acres have been cultivated, yielding 380lbs. The culture of tobacco extends over 1,499 acres, producing 7,469 cwt. of the weed. Upwards of 141 acres have been taken up for the cultivation of the sugar-cane, and last year produced 5,700lbs. The acreage for green food for cattle is 21,252; and for market-gardens and orchards 10,492 acres. Upwards of 2,126 acres are taken up for vineyards. The quantity of wine produced last year was 168,123 gallons; brandy, 1,439 gallons; besides upwards of 559 tons of grapes taken for table use.

STEAM TRAFFIC ON THE MURRAY.—As the time is now approaching for the resumption of traffic on the great inland streams, the steamers engaged in the Murray, Murrumbidgee, and Darling are making active preparations for a busy season, and, should the much wished for rainfall be propitious, they will shortly be engaged between the different towns on the Riverina. The advantage derivable to the vast tracts of country from these steamers is unquestionable, as they afford great facilities for the transmission of wool from the inland pastoral districts, and also for the carriage of stores to the different stations in the interior. The disadvantages against which they have to contend are considerable, arising from droughts which keep the river low, and also from the snags in the river. The tonnage of the fleet employed in this trade is over 2,000 tons, and gives employment to a great number of hands. There are over 30 steamers employed in this trade, averaging in size from 20 to 120 tons. Some of these steamers are entirely built of iron, but the greater proportion are wooden vessels. Besides the boats above mentioned, there are others which trade from Adelaide to the Darling and Murrumbidgee without coming up to Echuca. For

the convenience of steamers calling at Echuca, a splendid wharf has been built, alongside of which runs the Victorian line of railway, on which a large traffic is done in the wool season. Great complaints are made about the crane accommodation at this wharf; there are at present two only, an 8 ton and a 5 ton. A large and increasing amount of machinery is being transported by way of Echuca to Riverina every year, and a powerful crane would be of great service in facilitating its shipment. As feeders to the Victorian Railways these steamers perform a prominent part, and if the charges for the conveyance of produce from Echuca to Melbourne by rail could only be fixed so as to bear a proportion to the charges by water, a greatly increased traffic would result. At present the steamers take great quantities of wool to Gooliva, from whence, after a short transit, it can be brought by the sea to Melbourne at a cheaper rate than if forwarded by rail from Echuca. The principal route for the forwarding of wool to Melbourne is certainly by Echuca, but when there comes to be a difference of £2 per ton in the carriage, it is hardly to be wondered at, that settlers prefer the slower though cheaper mode of transit. It is to be regretted that the railway does not command the great bulk of that traffic for which it was originally constructed.

SYDNEY AGRICULTURAL EXHIBITION.—The annual exhibition of the Agricultural Society was held in the government domain at Paramatta, on the 24th and 25th May, which was on the whole a decided success, most of the exhibits being very superior. The show of pigs and poultry was very good, and there were also some very fine samples of colonial wines and other products exhibited. The show of fruit was small, and chiefly confined to oranges. There was an excellent collection of farming implements, buggies, and miscellaneous articles. Among the agricultural products were some samples of maizena and arrowroot, which were particularly good. The cultivation of maize and arrowroot for the purpose of producing these articles in large quantities will no doubt turn out a very remunerative speculation.

WHEAT IN MELBOURNE.—Wheat has been sown under favourable circumstances, and a great breadth of land is now under that crop, but owing to the present low price of grain there is no chance of cereal crops paying unless the yield is large, so our farmers are every year giving more attention to grass, dairy, and sheep farming. Wheat has been low ever since harvest, but the demand for export has been steady, and the quantity sent away has greatly relieved the market. There is not an agricultural district which has not a large surplus this year; and judging by the extent of land already sown, it will be the same next year if the coming season is at all prolific. Stock is in fine condition, the grass having been good ever since last spring, and it is long since a winter has been commenced under better prospects than the present.

Obituary.

PROFESSOR FARADAY.—The members will hear with sincere regret of the death of Professor Faraday, which took place on Sunday, the 18th inst., near Hampton-court. Michael Faraday was born in 1791, in the parish of Newington, Surrey, and, like many others who have illustrated the page of British history, was entirely a self-made man. After being instructed in the mere rudiments of knowledge, he was apprenticed to a bookseller and bookbinder, and continued to work at his trade till 1812. During this early period of his life, however, he showed the bent of his genius, for, in the intervals of his employment, he not only read with avidity such works on science as fell in his way, but applied himself to the construction of electric and other machines. Having been present at some of the last lectures delivered by Sir H. Davy, Faraday wrote to that distinguished chemist—asking him for encouragement, and at the same time inclosing notes of the lec-

tures at which he had been present. Sir H. Davy answered the request of the young aspirant promptly and kindly, and in 1813 he was admitted in the Royal Institution as chemical assistant to Professor Brande. Faraday soon became the favourite pupil and the friend of his patron, whom he accompanied in the autumn of the same year in a visit to France, Italy, Switzerland, &c., returning to his place in the Royal Institution in 1815. He now pursued his investigations of nature with great ardour, and published the results in various scientific journals. In 1820 he discovered the chlorides of carbon, and the year following the mutual rotation of a magnetic pole and an electric current; in 1823 the discovery of the condensation of gases; in 1831 and following years the development of the induction of electric currents, and the evolution of electricity from magnetism. The establishment of the principle of definite electrolytic action, the discovery of diamagnetism, and the influence of magnetism upon light, obtained for him, in 1846, the Rumford medal, and that of the Royal Society. In 1847 he announced to the world the magnetic character of oxygen, and the magnetic relations of flame and gases. When Mr. Fuller founded the chair of chemistry, in the Royal Institution, in 1833, Mr. Faraday was appointed first professor. In 1835 he received a pension of £300 a year from Lord Melbourne's Government, in recognition of his important services to science. In the following year he was appointed scientific adviser on lights to the Trinity House, and was subsequently nominated to a similar post under the Board of Trade. He was chemical lecturer from 1829 to 1842 to the cadets at the Royal Military Academy at Woolwich. In 1823 he was made a corresponding member of the Academy of Sciences in Paris; in 1825 he was elected a Fellow of the Royal Society; and in 1832 the honorary degree of Doctor of Civil Laws was conferred on him by the University of Oxford. He was a Knight of the Prussian Order of Merit, of the Italian Order of St. Maurice and Lazarus, and one of the Eight Foreign Associates of the Imperial Academy of Sciences of Paris. In 1855 he was nominated an officer of the Legion of Honour, and in 1863 he was made an associate of the Paris Academy of Medicine. He was elected a member of the Society of Arts in 1819, and took an active part in the proceedings of its committees. In 1866 he received the Albert Gold Medal of the Society for "his discoveries in electricity, magnetism, and chemistry, which, in their application to the industries of the world, have largely promoted Arts, Manufactures, and Commerce." Although the late Professor chiefly confined himself to experimental researches, there are theoretical views thrown out with regard to static induction, atmospheric electricity, the lines of force, both representative and physical, which are well worthy of consideration. His papers on the conservation of force, and on the division of gold and other metals are amongst his latest productions. His lectures adapted for young minds, delivered at the Royal Institution during Christmas time, will not easily be forgotten. The ease with which he descended from the heights of science, and conveyed in the minds of his youthful listeners the scientific principles of "common things," was not the least of the many gifts possessed by Dr. Faraday. But it is in connection with electricity, and its relations with almost all physical, chemical, and physiological phenomena that his fame will principally depend. His investigations on this subject led him to the presumption that electricity, magnetism, and light are but one and the same force, varying in effect according to circumstances, but obedient to laws which will one day be discovered.

Publications Issued.

THE FOULING AND CORROSION OF IRON SHIPS: their causes and means of protection, with the mode of appli-

cation to the existing iron-clads. By Charles F. T. Young, C.E. One vol., octavo. The fouling and corrosion of iron ships is still a problem unsolved. The author has made researches into the subject, and his book goes into its history, from early times down to the present. The author believes, as the result of his investigation, that the method of Mr. Daft, by means of zinc sheathing, as described by Mr. S. J. Mackie in his paper read before the Society during the last session, is in all respects "the soundest, the simplest, and most practical, and from being arranged in accordance with the known laws of nature, most certain of success." The work contains 212 pp., with seven wood engravings and two lithographs.

Notes.

FRESH HONOURS TO MEN OF SCIENCE, &c., IN FRANCE. —M. Claude Bernard, member of the Institut, and professor at the College of France, has been made Commander of the Legion of Honour. MM. Bertrand, D'Archiac, Delaunay, Hernute, members of the Institut; Bertholet, professor at the College of France; Abria, Dean of the Faculty of Science at Bordeaux; Béclard, member of the Academy of Medicine; Dr. Caffe, of the scientific press; De Chaumont, director of the Institut des Provinces; and Aubergier, Dean of the Faculty of Sciences of Clermont, promoted to the grade of Officers; and MM. Trécul, of the Institut; Fouqué, author of a work on the eruptions of Etna, and Santorin and Simonin, writers on scientific subjects, Chevaliers.

PROFESSIONAL FEMALE EDUCATION IN FRANCE. —Amongst the many excellent establishments which have been set on foot during the last few years in Paris is the *Société Lemonnier*, for the professional education of girls, presided over by the wives of several well known statesmen, M. Jules Simon amongst the number, and other ladies. The society is only four years old, but it possesses two schools, one having two hundred and the other nearly one hundred pupils. The mornings are devoted to general instruction and the application of science to the common wants of life, and the afternoons to professional study, such as book-keeping, and other commercial pursuits, drawing, engraving on wood, porcelain painting, making up clothes, linen, &c. Three engravings by pupils of the school were admitted to the last annual exhibition of pictures in Paris, and the collection of the school has now a silver medal from the jury of the International Exhibition. The school is unconnected with any sect, and, consequently, there is no question raised respecting the religion of the pupils or their parents; the catechism is replaced by simple moral lessons; there is a large library attached to each school, principally the result of donations from authors and publishers.

PARLIAMENTARY REPORTS.

SESSIONAL PRINTED PAPERS.

Par. *Delivered on 20th August, 1867.*
Numb.
486. Sasines (Scotland)—Return.
505. Civil Contingencies Fund—Accounts.
528. Terminable Annuities—Treasury Warrant.
542. Dogs Regulation (Ireland) Act (1866)—Return.
Public General Acts—Cap. 105.

Delivered on 21st August, 1867.

517. Railway, &c., Bills—Return.
527. Income and Property Tax—Returns.
Statistical Abstract for the United Kingdom from 1852 to 1866.

Patents.

From Commissioners of Patents' Journal, August 23rd.

GRANTS OF PROVISIONAL PROTECTION.

Athletic exercises, apparatus employed in—2265—W. Prangley.
Boats—2287—H. W. Withers.

Brushes—2090—H. A. Bonneville.
Cartridges and fire-arms—2277—A. J. Paterson.
Chimney tops—2297—C. Hohgrefe.
Cloth, apparatus for sinking—2281—T. S. Cressey and J. Webb.
Copriflakes, washing—2316—J. J. Rawlings and H. Wilkerson.
Dredging machines—2279—R. H. Michell.
Felting machines—2255—W. Wilson.
Fire-arms, breech-loading—2263—G. Schneider.
Fires, extinguishing—2200—J. Jones.
Fires, igniting—2188—W. L. L. Leaver and A. Smalley.
Flour, manufacturing—2291—T. J. Baker.
Gas and air (combined) engines—2245—C. D. Abel.
Glass, &c., moulding designs in—2257—L. V. Hue and C. Rozière.
Harrows—2251—W. R. Grace.
Hop, manufacturing extract and essence of—2132—T. A. Breithauph.
Hydraulic lifts—2236—J. H. Johnson.
Knives and forks—2295—W. J. Miller.
Letter-stamping machines—2288—F. Wirth.
Looms—2302—G. Hodgson.
Looms—2306—R. Edmondson.
Medicines, dispensing, preparing drugs, &c.—2239—E. A. Kirby.
Metallic alloy—2285—A. M. Clark.
Metals, removing impurities from—2308—C. D. Abel.
Metals, &c., preserving the surfaces of—1113—R. Alexander.
Motive-power—2289—J. E. F. Lüdeke.
Nails, manufacturing cut—2296—R. Heathfield.
Paper bags—2283—J. P. Binns.
Paper, waterproof—2267—T. Whittaker and M. Rourke.
Peat, &c., preparing—2233—F. L. H. Danchell.
Printing presses—2290—W. R. Lake.
Pulleys for window frames—2273—F. Ryland.
Railway points and signals—2234—J. Edwards.
Reeds for weaving—2269—A. M. Clark.
Sarsaparilla, &c., splitting and cutting—2310—E. Courtin.
Sewing machines—2275—E. Cornely.
Slate, &c., machine for cutting—2177—W. E. Gedge.
Steam engines, marine—2003—J. M. Gray.
Steam generators—2312—J. H. Evers.
Steam, &c., indicating and registering the pressure of—2249—A. Budenberg.
Stringed instruments—2298—H. A. Bonneville.
Sugar, clarifying—2237—E. T. Marler.
Sulphuric acid—2259—W. J. Pughley.
Telegraph cables—2241—T. Allan.
Telegraphs—2207—S. M. Martin and S. A. Varley.
Textile fabrics, &c.—2243—J. Smith.
Trenails—2271—E. J. W. Parnacott.
Twine or cord box—2293—F. J. Seymour.
Valves—2300—J. Davenport and J. Kilson.
Water-closets, &c.—2253—G. W. Dinsdale.
Windows, apparatus for cleaning—2304—G. Warsop.
Wood, reducing to shreds, to be used in the manufacture of paper pulp—2261—C. de Negri.

INVENTIONS WITH COMPLETE SPECIFICATIONS FILED.

Casks, cleaning—2345—J. Peacock.
Vessels, propelling—2352—H. Bodart and A. Sigodart.

PATENTS SEALED.

513. J. and J. Cash.	548. M. Mackay.
514. J. C. R. Weguelin and B. Hirst.	551. A. McDougall.
515. A. A. Croll.	563. A. A. Croll.
518. G. Dawes.	592. A. C. Lanrys.
527. C. Martin.	603. J. W. Lewis and G. Archbold.
534. F. W. Wight.	653. C. Mather.
543. J. Mcintosh.	827. G. Haseltine.
547. J. Livesey, J. Edwards, and W. Jeffreys.	918. J. Howard & E. T. Bousfield.

From Commissioners of Patents' Journal, August 27th.

PATENTS SEALED.

555. S. Shore.	615. G. Withy & J. F. Cotterell.
556. A. G. Chalus.	626. E. Storey.
557. J. Piddington.	636. I. Dimock and J. Gresham.
561. E. T. Hughes.	665. T. S. Turnbull.
562. J. Buhret.	694. D. Nicoll.
566. J. Harbert & F. Goodman.	871. G. Davies.
566. J. Bellerby.	942. J. E. Ward.
573. J. C. Broadbent.	1064. J. H. Player.
578. B. Sheard.	1527. A. Martin.
583. M. Gossi.	1875. W. E. Newton.

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

2137. J. Stenhouse.	2665. R. A. Broome.
2235. A. C. Kirk.	2089. E. T. Bellhouse and W. J. Doring.
2269. C. Atwood.	2095. R. Beard and W. Downing.
2277. R. Chrimes.	2088. A. A. L. P. Cochran.
2113. G. Haseltine.	2126. J. Lones.
2246. G. Haseltine.	

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

2039. S. Greenwood.	2083. J. H. C. Lacroisade.
2190. G. Wellman.	2055. R. Jobson & R. J. Ransome.
2271. G. Owen.	2063. G. T. Bousfield.